

GOOD GOLD MINES.

Not Far From The Sonora Railway,
Beyond the San Miguel River in
Sonora, That Have the Foundation
For a Profitable Enterprise.

DOCTOR A. HEAVENSTON,
President of the Estrella
Mining & Smelting Co.

Dear Sir: In accordance with
engagement by you I have made
a careful examination of the mines
of the company of which you are
the official head, (having made two
visits to the property) and beside
I have made a careful investigation
of the affairs of the company, from
which I have the honor to present
the following report, in which I
have embodied the suggestions re-
quested regarding future opera-
tions: The

LOCATION

of the properties is in the Municip-
ality of Cucurpe, in the Magdalena
district of the State of Sonora, Re-
public of Mexico, and they lie very
close to the southern boundary of
the district. They are about ten
miles northeast from the town of
Tuape, which is in the Ures dis-
trict, and they are about forty
miles from Querobabi station, on
the line of the Sonora railway,
which is about ninety miles south
from the international bound-
ary at Nogales. From Querobabi
there is a good wagon road to
Tuape. From that point travel is
over a good trail that passes the
north end of the property and is
the highway used in transportation
between the railway at Querobabi
and the famous mines at Las
Chispas, beyond the Sonora river.
Large pack trains of several hun-
dred mules each, bearing rich ores
and concentrates from Las Chispas
to the railway station pass the
camp frequently. Over a good
wagon road from Magdalena, about
seventy miles distant, machinery
and supplies can be transported
right to the tunnel entrance on the
properties. The

HOLDINGS

of the company embrace 28 pertenen-
cias of mining ground, (about
sixty-five acres) and they include
two continuous denouncements.
"Los Janos" ten pertenenencias, and
the "Guerrero," eighteen pertenen-
cias. Los Janos is 200 metres wide
(650 feet) and 500 metres long.
The Guerrero is 200 metres wide
and 900 metres long. Taken over
all the length of the two denounce-
ments is 4,500 feet—nearly one
mile. As more fully described
hereinafter there extend through
Los Janos no less than seven good
mineral bearing ledges, which unite
in one great ledge in the Guerrero
property. The general direction is
N. 21 degrees E., and the direction
of the ledges is about the same.
Their pitch is very slight. In fact
they go down almost perpendicu-
larly. The region is one of slates,
shales and porphyries, and the

FORMATION

is a good, gold bearing one. The
property is in a very favorable
location in one of the great mineral
zones extending through the state
of Sonora in a N. W. and S. E.
direction, and is in the same range

as Cerro Prieto, Sultana and Minas
Prietas, some of the most famous
producers in the state. The north
end of Los Janos property lies in
the cañon traversed by the trail to
Las Chispas, and as the ground
is traversed toward the other
end the surface rises abruptly
across a high mountain,
through and over which are
traced the seven ledges in the
ground on the Los Janos property
into the great ledge on the Guerrero
property on the other side of the
mountain. Wherever samples have
been taken on the croppings of
these ledges assays made have
shown values in gold and silver,
and some of them have shown re-
markably well for surface ores. In
Los Janos ground, about 600 feet
away from the present workings



TUNNEL NO. 1.

on the north end of the property
there is a great cross ledge, about
twenty feet in width, the croppings
of which have shown values in
gold and silver under laboratory
tests. It is likely that good ore
bodies, rich in value, will be found
at the intersection of this ledge
with the smaller ones traversing
the property lengthwise; and on
the same levels as the present
workings they will be considerably
deeper, as the surface rises very
abruptly from the site of the work-
ings to the cross ledge.

THE ORES

extracted with present develop-
ment consist principally of iron
arsenates and sulphurets, carrying
good values in gold and silver,
with some lead and a little copper.
They are soft and friable, crushed
easily and concentrated readily.
With very simple machinery they
can be concentrated three to four
tons into one, producing a high
grade concentrate that would pay
handsomely to ship to smelters,
realizing large profits and making
the enterprise a gilt edged invest-
ment. And there is a possibility
that in prosecuting development
and operation there will be en-
countered bodies of high grade
sulphurets, like those found in the
Santa Rosalia mine, not far dis-
tant, that yielded several carloads
of ore that each netted in value
more than twenty thousand dollars
in gold per carload. The form-
ation and character of the ores are
very similar to those at Santa
Rosalia, and the same results at-

tained there would not be surpris-
ing should they occur in these
properties. Upon its ordinary ores
the Santa Rosalia was worked pro-
fitably through a long period, and
its rich bonanzas were windfalls
that raised profits beyond all ex-
pectation. The

PRESENT WORKINGS

are near the north end of Los
Janos, but a few hundred feet south
of the road to Las Chispas, in a
narrow cañon which debouches
into the main cañon followed by
that road. This cañon passes be-
tween the second and third ledges.
From the cañon two tunnels are
run eastward cutting the second
ledge within thirty feet, about sixty
feet below the croppings. From
large samples weighing fifty pounds
or more taken in the first tunnel I
obtained an assay that yielded
\$12.50 gold per ton and seven and
one half ounces in silver. Another
fifty pound chunk, taken out at my
second visit, yielded an assay of
\$14.20 gold and eight ounces silver.
From the second tunnel I took a
mixed sample that yielded \$7.60 in
gold and 24½ ounces of silver per
ton. Upon the first ledge there
has been no work done, but large
pieces of float, weighing 100 pounds
or more, that have come from that
ledge, have yielded assays made
by Mr. Fitch, at Cerro Prieto,
that went as high as 200 ounces



TUNNEL NO. 2.

per ton in silver.

Upon the west side of the cañon
two tunnels have been run toward
the third ledge. The more north-
erly of the two has not reached the
ledge as yet. The southerly one
has cut the ledge, and ore taken
therefrom yielded \$13.60 gold and
five ounces in silver per ton. From
the cropping of the second ledge on
the south side of the cañon I took
a fifty pound chunk of the rock
that assayed \$8.80 gold per ton
and 12½ ounces in silver. This
ledge crops out in the bottom of
the cañon in a wide exposure of
black iron arsenate that I sampled
all the way across, a distance of
twelve feet. The bank stands al-
most perpendicular, and values are
leached out greatly, yet the aver-
age value was eighty cents gold and
six ounces silver per ton.

Between the second and third
ledges on the south side of the
cañon (the fourth and fifth of the
series) a shaft has been sunk a dis-

tance of about eighty feet, and it is
approaching the ledge described
with the broad, perpendicular crop-
ping in the cañon, being in the
vein casing already. Sinking a
further depth of twenty feet ought
to cut the ledge and show good re-
sults. From the fifth ledge in the
series I took a heavy fifty pound
chunk of the surface ore that as-
sayed \$8.40 gold and twenty-nine
ounces silver. From the sixth ledge
I got a large chunk fully as heavy
as any of the rest that gave assays
of \$7.40 gold, and 27 6-10 ounces
silver. From the croppings on the
seventh ledge I brought a large
chunk that assayed \$15 gold and
21.2 ounces in silver per ton. Some
of these assays were made by
Charles Taylor others by Godfrey
Hughes, two of the best assayers in
these parts. Their certificates are
appended to and made a part of
this report. Assays from large
samples taken by Mr. J. W. Baw-
den who sent them to Mark Wan-
less, a noted assayer at Hermosillo,
have shown well also. If possible
I shall get Mr. Wanless's certifi-
cates and incorporate the same in
this report. For

DEVELOPMENT WORK

I would recommend that the shaft
that is mentioned hereinbefore be
carried down to a depth of 200 feet.
From that level cross cuts should
be run in both directions and cut
all the ledges. Also drift on one
of the ledges to the cross vein or
ledge, which is about 600 feet south
from the shaft.

The work described above would
prove the mine thoroughly, and
would develop large quantities of
good concentrating ores, and it is
very likely that it would develop
considerable high grade shipping
ore. While the cross cutting and
drifting recommended would ex-
pose a great deal of good ore, de-
velopment for lower levels should
be continued, and the shaft should
be carried down to a depth of 500
feet at least, with levels every 100
feet duplicating the work recom-
mended on the 200 foot. With
that done there is no doubt that
you will have a valuable producing
gold mine, the output of which
may be used for development of
the great ledge in the Guerrero
ground and the wide cross ledge in
Los Janos ground.

As an enterprise appealing to the
investing public I know of none
that I would recommend more
readily than that in the control of
the Estrella Mining & Smelting
Company. Its property will com-
pare favorably with any. The pro-
duct, gold, is the standard of
valuation throughout the civilized
world, and is not subject to the
fluctuations of the market, as are
copper, silver and other metals.
The property is close to a trunk
line of railway, assuring cheap
transportation of supplies and
machinery; and right upon the
ground is an abundance of timber
for fuel to run machinery, while
development of the mine will sup-
ply all the water necessary to run
a large concentrating plant. An-
other factor which ought to recom-
mend it to the investor is the low
capitalization (but two million
dollars), of which about three-

(Concluded on page 4.)